

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	: Sev K. H. Keil et al.	Art Unit	: 3688
Serial No.	: 09/845,051	Examiner	: Daniel Lastra
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Title : SYSTEM TO PROVIDE CONSUMER PREFERENCE INFORMATION

Mail Stop Appeal Brief - Patents

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

BRIEF ON APPEAL

(1) Real Party in Interest

True Choice Solutions, Inc.

(2) Related Appeals and Interferences

There are no related appeals or interferences.

(3) Status of Claims

Claims 1-7, 9, 10, 13-17, 19-22, 27-34, 39-45, 47, 48, 51-55, 57-60, and 65-71 are pending in the application, of which claims 1, 22, 31, 34, 39, 60, and 69 are independent. Claims 8, 11, 12, 18, 23-26, 35-38, 46, 49, 50, 56, 61-64, and 72-77 have been previously cancelled. Claim 34 has been withdrawn from consideration. Claims 1-7, 9, 10, 13-17, 19-22, 27-33, 39-45, 47, 48, 51-55, 57-60, and 65-71 have been rejected. The rejection of claims 1-7, 9, 10, 13-17, 19-22, 27-33, 39-45, 47, 48, 51-55, 57-60, and 65-71 is being appealed.

(4) Status of Amendments

All amendments have been entered. No amendments to the claims have been filed after the final Office Action of January 8, 2010.

(5) Summary of Claimed Subject Matter

The following summarizes disclosure related to each independent claim with references to the application specification and drawings. The references to the specification and drawings are meant to be exemplary, and not limiting.

Independent claim 1 is directed to a computer-implemented method for calculating adjusted preference information. *See, e.g.*, Application, p. 13, lines 27-31.

The method includes storing, in a computer memory storage system and for a plurality of consumers, preference information related to different attributes of a type of product, the stored preference information for an individual consumer including numerical values that are reflective of the individual consumer's preference for different attribute levels for the attributes of the type of product, and the plurality of consumers including a first consumer, a second consumer, and other consumers. *See, e.g.*, Application, FIG. 1, S1; FIG. 3, data storage device 290; p. 14, line 29 to p. 15, line 9.

The method also includes, based on the stored preference information for the plurality of consumers, dividing, using a processing device, the plurality of consumers into multiple different sub-groups of constituent members for whom similar preference information is determined to be stored in the computer memory storage system, each of the multiple different sub-groups including less than all of the plurality of consumers. *See, e.g.*, Application, FIG. 10, S1002; p. 23, lines 9-16.

The method also includes, based on the preference information stored for the first consumer, generating, using a processing device, a first set of trade-off questions for the first consumer that solicit answers from the first consumer regarding choices between different attribute levels for attributes of the type of product. *See, e.g.*, Application, FIG. 5, S502; p. 16, lines 15-20.

The method also includes providing the first set of trade-off questions to the first consumer. *See, e.g.*, Application, FIG. 5, S503; p. 19, lines 27-30.

The method also includes predicting, using a processing device, the first consumer's answers to the first set of trade-off questions. *See, e.g.*, Application, FIG. 5, S505; p. 20, lines 27-28.

The method also includes receiving answers to the first set of trade-off questions from the first consumer. *See, e.g.*, Application, FIG. 5, S504; p. 20, lines 7-11.

The method also includes comparing preference information stored for the first consumer to information that is reflective of the preferences of constituent members of at least some of the multiple sub-groups of consumers. *See, e.g.*, Application, p. 27, lines 1-5.

The method also includes, based on results of comparing the preference information stored for the first consumer to the information that is reflective of the preferences of constituent members of some of the multiple sub-groups of consumers, determining that the preference information stored for the first consumer is similar to preference information stored for constituent members of a first one of the multiple sub-groups of consumers. *See, e.g.*, Application, p. 27, lines 1-5.

The method also includes selecting, using a processing device, the first sub-group of consumers from among the multiple sub-groups of consumers as a match for the first consumer based on having determined that the preference information stored for the first consumer is similar to preference information stored for constituent members of the first sub-group of consumers. *See, e.g.*, Application, FIG. 13, S1302; p. 26, line 30 to p. 27, line 5.

The method also includes, for at least one attribute level of a particular attribute of the type of product, calculating, using a processing device, an average value of the first sub-group's preference for the at least one attribute level based on the stored values that are reflective of the first sub-group's constituent members' preferences for the at least one attribute level. *See, e.g.*, Application, FIG. 10, S1005; p. 25, lines 21-30.

The method also includes, based on the first consumer's received answers to the first set of trade-off questions and the predicted answers to the first set of trade-off questions for the first consumer, determining, using a processing device, a first adjustment ratio for use in adjusting the stored value that is reflective of the first consumer's preference for the at least one attribute level, the first adjustment ratio specifying proportions in which the stored value that is reflective of the first consumer's preference for the at least one attribute level and the average value of the first sub-group's preference for the at least one attribute level are to be combined to adjust the stored value that is reflective of the first consumer's preference for the at least one attribute level. *See, e.g.*, Application, FIG. 13, S1303; p. 27, lines 6-19.

The method also includes adjusting, using a processing device, the stored value that is reflective of the first consumer's preference for the at least one attribute level as a function of the determined first adjustment ratio and the average value of the first sub-group's preference for the at least one attribute level by combining the stored value that is reflective of the first consumer's preference for the at least one attribute level with the average value of the first sub-group's preference for the at least one attribute level in the proportions for the stored value that is reflective of the first consumer's preference for the at least one attribute level and the average value of the first sub-group's preference for the at least one attribute level specified by the first adjustment ratio. *See, e.g., Application, FIG. 13, S1304; p. 27, lines 20-27.*

The method also includes, based on the preference information stored for the second consumer, generating, using a processing device, a second set of trade-off questions for the second consumer that solicit answers from the second consumer regarding choices between different attribute levels for attributes of the type of product. *See, e.g., Application, FIG. 5, S502; p. 16, lines 15-20.*

The method also includes providing the second set of trade-off questions to the second consumer. *See, e.g., Application, FIG. 5, S503; p. 19, lines 27-30.*

The method also includes predicting, using a processing device, the second consumer's answers to the second set of trade-off questions. *See, e.g., Application, FIG. 5, S505; p. 20, lines 27-28.*

The method also includes receiving answers to the second set of trade-off questions from the second consumer. *See, e.g., Application, FIG. 5, S504; p. 20, lines 7-11.*

The method also includes comparing preference information stored for the second consumer to information that is reflective of the preferences of constituent members of at least some of the multiple sub-groups of consumers. *See, e.g., Application, p. 27, lines 1-5.*

The method also includes, based on results of comparing the preference information stored for the second consumer to the information that is reflective of the preferences of constituent members of some of the multiple sub-groups of consumers, determining that the preference information stored for the second consumer is similar to preference information stored for constituent members of a second one of the multiple sub-groups of consumers. *See, e.g., Application, p. 27, lines 1-5.*

The method also includes selecting, using a processing device, the second sub-group of consumers from among the multiple sub-groups of consumers as a match for the second consumer based on having determined that the preference information stored for the second user is similar to preference information stored for constituent members of the second sub-group of consumers. *See, e.g.*, Application, FIG. 13, S1302; p. 26, line 30 to p. 27, line 5.

The method also includes, for the at least one attribute level, calculating, using a processing device, an average value of the second sub-group's preference for the at least one attribute level based on the stored values that are reflective of the second sub-group's constituent members' preferences for the at least one attribute level. *See, e.g.*, Application, FIG. 10, S1005; p. 25, lines 21-30.

The method also includes, based on the second consumer's received answers to the second set of trade-off questions and the predicted answers to the second set of trade-off questions for the second consumer, determining, using a processing device, a second adjustment ratio for use in adjusting the stored value that is reflective of the second consumer's preference for the at least one attribute level, wherein the second adjustment ratio is different than the first adjustment ratio and specifies proportions in which the stored value that is reflective of the second consumer's preference for the at least one attribute level and the average value of the second sub-group's preference for the at least one attribute level are to be combined to adjust the stored value that is reflective of the second consumer's preference for the at least one attribute level. *See, e.g.*, Application, FIG. 13, S1303; p. 27, lines 6-19.

The method also includes adjusting, using a processing device, the stored value that is reflective of the second consumer's preference for the at least one attribute level as a function of the determined second adjustment ratio and the average value of the second sub-group's preference for the at least one attribute level by combining the stored value that is reflective of the second consumer's preference for the at least one attribute level with the average value of the second sub-group's preference for the at least one attribute level in the proportions for the stored value that is reflective of the second consumer's preference for the at least one attribute level and the average value of the second sub-group's preference for the at least one attribute level specified by the second adjustment ratio. *See, e.g.*, Application, FIG. 13; p. 27, lines 20-27.

Independent claim 22 is related to a computer-implemented method for calculating adjusted preference information. *See, e.g.*, Application, p. 13, lines 27-31.

The method includes storing, in a computer memory storage system and for a plurality of consumers, preference information related to different attributes of a type of product, the stored preference information for an individual consumer including numerical values that are reflective of the individual consumer's preference for different attribute levels for the attributes of the type of product, and the plurality of consumers including a particular consumer and other consumers. *See, e.g.*, Application, FIG. 3, data storage device 290; p. 14, line 29 to p. 15, line 9.

The method also includes, based on the stored preference information for the plurality of consumers, dividing, using a processing device, the plurality of consumers into multiple different sub-groups of constituent members for whom similar preference information is determined to be stored in the computer memory storage system, each of the multiple different sub-groups including less than all of the plurality of consumers. *See, e.g.*, Application, FIG. 10, S1002; p. 23, lines 9-16.

The method also includes, based on the preference information stored for the particular consumer, generating, using a processing device, a set of trade-off questions for the particular consumer that solicit answers from the particular consumer regarding choices between different attribute levels for attributes of the type of product. *See, e.g.*, Application, FIG. 5, S502; p. 16, lines 15-20.

The method also includes providing the set of trade-off questions to the particular consumer. *See, e.g.*, Application, FIG. 5, S503; p. 19, lines 27-30.

The method also includes predicting, using a processing device, the particular consumer's answers to the set of trade-off questions. *See, e.g.*, Application, FIG. 5, S505; p. 20, lines 27-28.

The method also includes receiving answers to the set of trade-off questions from the particular consumer. *See, e.g.*, Application, FIG. 5, S504; p. 20, lines 7-11.

The method also includes comparing preference information stored for the particular consumer to information that is reflective of the preferences of constituent members of at least some of the multiple sub-groups of consumers. *See, e.g.*, Application, p. 27, lines 1-5.

The method also includes, based on results of comparing the preference information stored for the particular consumer to information that is reflective of the preferences of

constituent members of some of the multiple sub-groups of consumers, determining that the preference information stored for the particular consumer is similar to preference information stored for constituent members of a particular one of the multiple sub-groups of consumers. *See, e.g., Application, p. 27, lines 1-5.*

The method also includes selecting, using a processing device, the particular sub-group of consumers from among the multiple sub-groups of consumers as a match for the particular consumer based on having determined that the preference information stored for the particular consumer is similar to preference information stored for constituent members of the particular sub-group of consumers. *See, e.g., Application, FIG. 13, S1302; p. 26, line 30 to p. 27, line 5.*

The method also includes, for at least one attribute level of a particular attribute of the type of product, calculating, using a processing device, an average value of the particular sub-group's preference for the at least one attribute level based on the stored values that are reflective of the particular sub-group's constituent members' preferences for the at least one attribute level. *See, e.g., Application, FIG. 10, S1005; p. 25, lines 21-30.*

The method also includes, based on the particular consumer's received answers to the set of trade-off questions and the predicted answers to the set of trade-off questions for the particular consumer, determining, using a processing device, an adjustment ratio for use in adjusting the stored value that is reflective of the particular consumer's preference for the at least one attribute level, the adjustment ratio specifying proportions in which the stored value that is reflective of the particular consumer's preference for the at least one attribute level and the average value of the particular sub-group's preference for the at least one attribute level are to be combined to adjust the stored value that is reflective of the particular consumer's preference for the at least one attribute level. *See, e.g., Application, FIG. 13, S1303; p. 27, lines 6-19.*

The method also includes adjusting, using a processing device, the stored value that is reflective of the particular consumer's preference for the at least one attribute level as a function of the determined adjustment ratio and the average value of the particular sub-group's preference for the at least one attribute level by combining the stored value that is reflective of the particular consumer's preference for the at least one attribute level with the average value of the particular sub-group's preference for the at least one attribute level in the proportions for the stored value that is reflective of the particular consumer's preference for the at least one attribute level and the

average value of the particular sub-group's preference for the at least one attribute level specified by the adjustment ratio. *See, e.g., Application, FIG. 13, S1304; p. 27, lines 20-27.*

Independent claim 31 is related to a computer-implemented method for calculating adjusted consumer preference information. *See, e.g., Application, p. 13, lines 27-31.*

The method includes receiving, for a plurality of consumers, preference information related to different attributes of a product, the received preference information for an individual consumer including numerical values that are reflective of the individual consumer's preference for different attribute levels for the attributes of the type of product, and the plurality of consumers including a particular consumer and other consumers. *See, e.g., Application, FIG. 1, S1; p. 7, lines 4-11.*

The method also includes currency-normalizing the received preference information for the plurality of consumers. *See, e.g., Application, FIG. 10, S1001; p. 21, lines 25-31.*

The method also includes storing, in a computer memory storage system, the currency-normalized preference information for the plurality of consumers. *See, e.g., Application, FIG. 3, data storage device 290; p. 14, line 29 to p. 15, line 9.*

The method also includes, based on the stored, currency-normalized preference information for the plurality of consumers, dividing, using a processing device, the plurality of consumers into multiple different sub-groups of constituent members for whom similar currency-normalized preference information is determined to be stored in the computer memory storage system, each of the multiple different sub-groups including less than all of the plurality of consumers. *See, e.g., Application, FIG. 10, S1002; p. 23, lines 9-16.*

The method also includes, based on the currency-normalized preference information stored for the particular consumer, generating, using a processing device, a set of trade-off questions for the particular consumer that solicit answers from the particular consumer regarding choices between different attribute levels for attributes of the type of product. *See, e.g., Application, FIG. 5, S502; p. 16, lines 15-20.*

The method also includes providing the set of trade-off questions to the particular consumer. *See, e.g., Application, FIG. 5, S503; p. 19, lines 27-30.*

The method also includes predicting, using a processing device, the particular consumer's answers to the set of trade-off questions. *See, e.g.*, Application, FIG. 5, S505; p. 20, lines 27-28.

The method also includes receiving answers to the set of trade-off questions from the particular consumer. *See, e.g.*, Application, FIG. 5, S504; p. 20, lines 7-11.

The method also includes comparing currency-normalized preference information stored for the particular consumer to information that is reflective of the currency-normalized preferences of constituent members of at least some of the multiple sub-groups of consumers. *See, e.g.*, Application, p. 27, lines 1-5.

The method also includes, based on results of comparing the currency-normalized preference information stored for the particular consumer to information that is reflective of the currency-normalized preferences of constituent members of some of the multiple sub-groups of consumers, determining that the currency-normalized preference information stored for the particular consumer is similar to currency-normalized preference information stored for constituent members of a particular one of the multiple sub-groups of consumers. *See, e.g.*, Application, p. 27, lines 1-5.

The method also includes selecting, using a processing device, the particular sub-group of consumers from among the multiple sub-groups of consumers as a match for the particular consumer based on having determined that the currency-normalized preference information stored for the particular consumer is similar to currency-normalized preference information stored for constituent members of the particular sub-group of consumers. *See, e.g.*, Application, FIG. 13, S1302; p. 26, line 30 to p. 27, line 5.

The method also includes, for at least one attribute level of a particular attribute of the type of product, calculating, using a processing device, an average value of the particular sub-group's currency-normalized preference for the at least one attribute level based on the stored currency-normalized values that are reflective of the particular sub-group's constituent members' currency-normalized preferences for the at least one attribute level. *See, e.g.*, Application, FIG. 10, S1005; p. 25, lines 21-30.

The method also includes, based on the particular consumer's received answers to the set of trade-off questions and the predicted answers to the set of trade-off questions for the particular consumer, determining, using a processing device, an adjustment ratio for use in adjusting the

currency-normalized stored value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level, the adjustment ratio specifying proportions in which the currency-normalized stored value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level and the average value of the particular sub-group's currency-normalized preference for the at least one attribute level are to be combined to adjust the currency-normalized stored value that is reflective of the particular consumer's preference for the at least one attribute level. *See, e.g., Application, FIG. 13, S1303; p. 27, lines 6-19.*

The method also includes adjusting, using a processing device, the stored currency-normalized value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level as a function of the determined adjustment ratio and the average value of the particular sub-group's currency-normalized preference for the at least one attribute level by combining the currency-normalized stored value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level with the average value of the particular sub-group's currency-normalized preference for the at least one attribute level in the proportions for the currency-normalized stored value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level and the average value of the particular sub-group's currency-normalized preference for the at least one attribute level specified by the adjustment ratio. *See, e.g., Application, FIG. 13, S1304; p. 27, lines 20-27.*

Independent claim 39 is related to a computer-readable medium storing instructions executed by a processor. *See, e.g., Application, p. 13, lines 27-31; p. 14, lines 23-24.*

The computer-readable medium includes instructions that, when executed, cause the process to store, for a plurality of consumers, preference information related to different attributes of a type of product, the stored preference information for an individual consumer including numerical values that are reflective of the individual consumer's preference for different attribute levels for the attributes of the type of product, and the plurality of consumers including a first consumer, a second consumer, and other consumers. *See, e.g., Application, FIG. 1, S1; FIG. 3, data storage device 290; p. 14, line 29 to p. 15, line 9.*

The computer-readable medium also includes instructions that, when executed, cause the process to, based on the stored preference information for the plurality of consumers, divide the plurality of consumers into multiple different sub-groups of constituent members for whom similar preference information is determined to be stored, each of the multiple different sub-groups including less than all of the plurality of consumers. *See, e.g.*, Application, FIG. 10, S1002; p. 23, lines 9-16.

The computer-readable medium also includes instructions that, when executed, cause the process to generate, based on the preference information stored for the first consumer, a first set of trade-off questions for the first consumer that solicit answers from the first consumer regarding choices between different attribute levels for attributes of the type of product. *See, e.g.*, Application, FIG. 5, S502; p. 16, lines 15-20.

The computer-readable medium also includes instructions that, when executed, cause the process to provide the first set of trade-off questions to the first consumer. *See, e.g.*, Application, FIG. 5, S503; p. 19, lines 27-30.

The computer-readable medium also includes instructions that, when executed, cause the process to predict the first consumer's answers to the first set of trade-off questions. *See, e.g.*, Application, FIG. 5, S505; p. 20, lines 27-28.

The computer-readable medium also includes instructions that, when executed, cause the process to receive answers to the first set of trade-off questions from the first consumer. *See, e.g.*, Application, FIG. 5, S504; p. 20, lines 7-11.

The computer-readable medium also includes instructions that, when executed, cause the process to compare preference information stored for the first consumer to information that is reflective of the preferences of constituent members of at least some of the multiple sub-groups of consumers. *See, e.g.*, Application, p. 27, lines 1-5.

The computer-readable medium also includes instructions that, when executed, cause the process to, based on results of comparing the preference information stored for the first consumer to the information that is reflective of the preferences of constituent members of some of the multiple sub-groups of consumers, determine that the preference information stored for the first consumer is similar to preference information stored for constituent members of a first one of the multiple sub-groups of consumers. *See, e.g.*, Application, p. 27, lines 1-5.

The computer-readable medium also includes instructions that, when executed, cause the process to select, from among the multiple sub-groups of consumers, the first sub-group of consumers as a match for the first consumer based on having determined that the preference information for the first consumer is similar to preference information stored for constituent members of the first sub-group of consumers. *See, e.g.*, Application, FIG. 13, S1302; p. 26, line 30 to p. 27, line 5.

The computer-readable medium also includes instructions that, when executed, cause the process to calculate, for at least one attribute level of a particular attribute of the type of product, an average value of the first sub-group's preference for the at least one attribute level based on the stored values that are reflective of the first sub-group's constituent members' preferences for the at least one attribute level. *See, e.g.*, Application, FIG. 10, S1005; p. 25, lines 21-30.

The computer-readable medium also includes instructions that, when executed, cause the process to determine, based on the first consumer's received answers to the first set of trade-off questions and the predicted answers to the first set of trade-off questions for the first consumer, a first adjustment ratio for use in adjusting the stored value that is reflective of the first consumer's preference for the at least one attribute level, the first adjustment ratio specifying proportions in which the stored value that is reflective of the first consumer's preference for the at least one attribute level and the average value of the first sub-group's preference for the at least one attribute level are to be combined to adjust the stored value that is reflective of the first consumer's preference for the at least one attribute level. *See, e.g.*, Application, FIG. 13, S1303; p. 27, lines 6-19.

The computer-readable medium also includes instructions that, when executed, cause the process to adjust the stored value that is reflective of the first consumer's preference for the at least one attribute level as a function of the determined first adjustment ratio and the average value of the first sub-group's preference for the at least one attribute level by combining the stored value that is reflective of the first consumer's preference for the at least one attribute level with the average value of the first sub-group's preference for the at least one attribute level in the proportions for the stored value that is reflective of the first consumer's preference for the at least one attribute level and the average value of the first sub-group's preference for the at least one

attribute level specified by the first adjustment ratio. *See, e.g.*, Application, FIG. 13, S1304; p. 27, lines 20-27.

The computer-readable medium also includes instructions that, when executed, cause the process to, based on the preference information stored for the second consumer, generate a second set of trade-off questions for the second consumer that solicit answers from the second consumer regarding choices between different attribute levels for attributes of the type of product. *See, e.g.*, Application, FIG. 5, S502; p. 16, lines 15-20.

The computer-readable medium also includes instructions that, when executed, cause the process to provide the second set of trade-off questions to the second consumer. *See, e.g.*, Application, FIG. 5, S503; p. 19, lines 27-30.

The computer-readable medium also includes instructions that, when executed, cause the process to predict the second consumer's answers to the second set of trade-off questions. *See, e.g.*, Application, FIG. 5, S505; p. 20, lines 27-28.

The computer-readable medium also includes instructions that, when executed, cause the process to receive answers to the second set of trade-off questions from the second consumer. *See, e.g.*, Application, FIG. 5, S504; p. 20, lines 7-11.

The computer-readable medium also includes instructions that, when executed, cause the process to compare preference information stored for the second consumer to information that is reflective of the preferences of constituent members of at least some of the multiple sub-groups of consumers. *See, e.g.*, Application, p. 27, lines 1-5.

The computer-readable medium also includes instructions that, when executed, cause the process to, based on results of comparing the preference information stored for the second consumer to information that is reflective of the preferences of constituent members of some of the multiple sub-groups of consumers, determine that the preference information stored for the second consumer is similar to preference information stored for constituent members of a second one of the multiple sub-groups of consumers. *See, e.g.*, Application, p. 27, lines 1-5.

The computer-readable medium also includes instructions that, when executed, cause the process to select, from among the multiple sub-groups of consumers, the second sub-group of consumers as a match for the second consumer based on having determined that the preference information stored for the second consumer is similar to the preference information stored for

constituent members of the second sub-group of consumers. *See, e.g.*, Application, FIG. 13, S1302; p. 26, line 30 to p. 27, line 5.

The computer-readable medium also includes instructions that, when executed, cause the process to calculate, for the at least one attribute level, an average value of the second sub-group's preference for the at least one attribute level based on the stored values that are reflective of the second sub-group's constituent members' preferences for the at least one attribute level. *See, e.g.*, Application, FIG. 10, S1005; p. 25, lines 21-30.

The computer-readable medium also includes instructions that, when executed, cause the process to determine, based on the second consumer's received answers to the second set of trade-off questions and the predicted answers to the second set of trade-off questions for the second consumer, a second adjustment ratio for use in adjusting the stored value that is reflective of the second consumer's preference for the at least one attribute level, wherein the second adjustment ratio is different than the first adjustment ratio and specifies proportions in which the stored value that is reflective of the second consumer's preference for the at least one attribute level and the average value of the second sub-group's preference for the at least one attribute level are to be combined to adjust the stored value that is reflective of the second consumer's preference for the at least one attribute level. *See, e.g.*, Application, FIG. 13, S1303; p. 27, lines 6-19.

The computer-readable medium also includes instructions that, when executed, cause the process to adjust the stored value that is reflective of the second consumer's preference for the at least one attribute level as a function of the determined second adjustment factor and the average value of the second sub-group's preference for the at least one attribute level by combining the stored value that is reflective of the second consumer's preference for the at least one attribute level with the average value of the second sub-group's preference for the at least one attribute level in the proportions for the stored value that is reflective of the second consumer's preference for the at least one attribute level and the average value of the second sub-group's preference for the at least one attribute level specified by the second adjustment ratio. *See, e.g.*, Application, FIG. 13; p. 27, lines 20-27.

Independent claim 60 is related to a computer-readable medium storing instructions executed by a processor. *See, e.g.*, Application, p. 13, lines 27-31; p. 14, lines 23-24.

The computer-readable medium includes instructions that, when executed, cause the process to store, for a plurality of consumers, preference information related to different attributes of a type of product, the stored preference information for an individual consumer including numerical values that are reflective of the individual consumer's preference for different attribute levels for the attributes of the type of product, and the plurality of consumers including a particular consumer and other consumers. *See, e.g.*, Application, FIG. 3, data storage device 290; p. 14, line 29 to p. 15, line 9.

The computer-readable medium also includes instructions that, when executed, cause the process to, based on the stored preference information for the plurality of consumers, divide the plurality of consumers into multiple different sub-groups of constituent members for whom similar preference information is determined to be stored, each of the multiple different sub-groups including less than all of the plurality of consumers. *See, e.g.*, Application, FIG. 10, S1002; p. 23, lines 9-16.

The computer-readable medium also includes instructions that, when executed, cause the process to, based on the preference information stored for the particular consumer, generate a set of trade-off questions for the particular consumer that solicit answers from the particular consumer regarding choices between different attribute levels for attributes of the type of product. *See, e.g.*, Application, FIG. 5, S502; p. 16, lines 15-20.

The computer-readable medium also includes instructions that, when executed, cause the process to provide the set of trade-off questions to the particular consumer. *See, e.g.*, Application, FIG. 5, S503; p. 19, lines 27-30.

The computer-readable medium also includes instructions that, when executed, cause the process to predict the particular consumer's answers to the set of trade-off questions. *See, e.g.*, Application, FIG. 5, S505; p. 20, lines 27-28.

The computer-readable medium also includes instructions that, when executed, cause the process to receive answers to the set of trade-off questions from the particular consumer. *See, e.g.*, Application, FIG. 5, S504; p. 20, lines 7-11.

The computer-readable medium also includes instructions that, when executed, cause the process to compare preference information stored for the particular consumer to information that is reflective of the preferences of constituent members of at least some of the multiple sub-groups of consumers. *See, e.g., Application, p. 27, lines 1-5.*

The computer-readable medium also includes instructions that, when executed, cause the process to, based on results of comparing the preference information stored for the particular consumer to the information that is reflective of the preferences of constituent members of some of the multiple sub-groups of consumers, determine that the preference information stored for the particular consumer is similar to preference information stored for constituent members of a particular one of the multiple sub-groups of consumers. *See, e.g., Application, p. 27, lines 1-5.*

The computer-readable medium also includes instructions that, when executed, cause the process to select, from among the multiple sub-groups of consumers, the particular sub-group of consumers as a match for the particular consumer based on having determined that the preference information stored for the particular consumer is similar to preference information stored for constituent members of the particular sub-group of consumers. *See, e.g., Application, FIG. 13, S1302; p. 26, line 30 to p. 27, line 5.*

The computer-readable medium also includes instructions that, when executed, cause the process to calculate, for at least one attribute level of a particular attribute of the type of product, an average value of the particular sub-group's preference for the at least one attribute level based on the stored values that are reflective of the particular sub-group's constituent members' preferences for the at least one attribute level. *See, e.g., Application, FIG. 10, S1005; p. 25, lines 21-30.*

The computer-readable medium also includes instructions that, when executed, cause the process to, based on the particular consumer's received answers to the set of trade-off questions and the predicted answers to the set of trade-off questions for the particular consumer, determine an adjustment ratio for use in adjusting the stored value that is reflective of the particular consumer's preference for the at least one attribute level, the adjustment ratio specifying proportions in which the stored value that is reflective of the particular consumer's preference for the at least one attribute level and the average value of the particular sub-group's preference for the at least one attribute level are to be combined to adjust the stored value that is reflective of

the particular consumer's preference for the at least one attribute level. , *e.g.*, Application, FIG. 13, S1303; p. 27, lines 6-19.

The computer-readable medium also includes instructions that, when executed, cause the process to adjust the stored value that is reflective of the particular consumer's preference for the at least one attribute level as a function of the determined adjustment ratio and the average value of the particular sub-group's preference for the at least one attribute level by combining the stored value that is reflective of the particular consumer's preference for the at least one attribute level with the average value of the particular sub-group's preference for the at least one attribute level in the proportions for the stored value that is reflective of the particular consumer's preference for the at least one attribute level and the average value of the particular sub-group's preference for the at least one attribute level specified by the adjustment ratio. *See, e.g.*, Application, FIG. 13, S1304; p. 27, lines 20-27.

Independent claim 69 is related to a computer-readable medium storing instructions executed by a processor. *See, e.g.*, Application, p. 13, lines 27-31; p. 14, lines 23-24.

The computer-readable medium includes instructions that, when executed, cause the process to receive, for a plurality of consumers, preference information related to different attributes of a product, the received preference information for an individual consumer including numerical values that are reflective of the individual consumer's preference for different attribute levels for the attributes of the type of product, and the plurality of consumers including a particular consumer and other consumers. *See, e.g.*, Application, FIG. 1, S1; .p. 7, lines 4-11.

The computer-readable medium also includes instructions that, when executed, cause the process to currency-normalize the received preference information for the plurality of consumers. *See, e.g.*, Application, FIG. 10, S1001; p. 21, lines 25-31.

The computer-readable medium also includes instructions that, when executed, cause the process to store the currency-normalized preference information for the plurality of consumers. *See, e.g.*, Application, FIG. 3, data storage device 290; p. 14, line 29 to p. 15, line 9.

The computer-readable medium also includes instructions that, when executed, cause the process to, based on the stored, currency-normalized preference information for the plurality of consumers, divide the plurality of consumers into multiple different sub-groups of constituent

members for whom similar currency-normalized preference information is determined to be stored, each of the multiple different sub-groups including less than all of the plurality of consumers. *See, e.g.*, Application, FIG. 10, S1002; p. 23, lines 9-16.

The computer-readable medium also includes instructions that, when executed, cause the process to generate, based on the currency-normalized preference information stored for the particular consumer, a set of trade-off questions for the particular consumer that solicit answers from the particular consumer regarding choices between different attribute levels for attributes of the type of product. *See, e.g.*, Application, FIG. 5, S502; p. 16, lines 15-20.

The computer-readable medium also includes instructions that, when executed, cause the process to provide the set of trade-off questions to the particular consumer. *See, e.g.*, Application, FIG. 5, S503; p. 19, lines 27-30.

The computer-readable medium also includes instructions that, when executed, cause the process to predict the particular consumer's answers to the set of trade-off questions. *See, e.g.*, Application, FIG. 5, S505; p. 20, lines 27-28.

The computer-readable medium also includes instructions that, when executed, cause the process to receive answers to the set of trade-off questions from the particular consumer. *See, e.g.*, Application, FIG. 5, S504; p. 20, lines 7-11.

The computer-readable medium also includes instructions that, when executed, cause the process to compare currency-normalized preference information stored for the particular consumer to information that is reflective of the currency-normalized preferences of constituent members of at least some of the multiple sub-groups of consumers. *See, e.g.*, Application, p. 27, lines 1-5.

The computer-readable medium also includes instructions that, when executed, cause the process to, based on results of comparing the currency-normalized preference information stored for the particular consumer to the information that is reflective of the currency-normalized preferences of constituent members of some of the multiple sub-groups of consumers, determine that the currency-normalized preference information stored for the particular consumer is similar to currency-normalized preference information stored for constituent members of a particular one of the multiple sub-groups of consumers. *See, e.g.*, Application, p. 27, lines 1-5.

The computer-readable medium also includes instructions that, when executed, cause the process to select, from among the multiple sub-groups of consumers, the particular sub-group of consumers as a match for the particular consumer based on having determined that the currency-normalized preference information stored for the particular consumer is similar to currency-normalized preference information stored for constituent members of the particular sub-group of consumers. *See, e.g., Application, FIG. 13, S1302; p. 26, line 30 to p. 27, line 5.*

The computer-readable medium also includes instructions that, when executed, cause the process to calculate, for at least one attribute level of a particular attribute of the type of product, an average value of the particular sub-group's currency-normalized preference for the at least one attribute level based on the stored currency-normalized values that are reflective of the particular sub-group's constituent members' currency-normalized preferences for the at least one attribute level. *See, e.g., Application, FIG. 10, S1005; p. 25, lines 21-30.*

The computer-readable medium also includes instructions that, when executed, cause the process to determine, based on the particular consumer's received answers to the set of trade-off questions and the predicted answers to the set of trade-off questions for the particular consumer, an adjustment ratio for use in adjusting the currency-normalized stored value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level, the adjustment ratio specifying proportions in which the currency-normalized stored value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level and the average value of the particular sub-group's currency-normalized preference for the at least one attribute level are to be combined to adjust the currency-normalized stored value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level. *See, e.g., Application, FIG. 13, S1303; p. 27, lines 6-19.*

The computer-readable medium also includes instructions that, when executed, cause the process to adjust the stored currency-normalized value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level as a function of the determined adjustment ratio and the currency-normalized value of the particular sub-group's currency-normalized preference for the at least one attribute level by combining the currency-normalized stored value that is reflective of the particular consumer's currency-normalized

preference for the at least one attribute level with the average value of the particular sub-group's currency-normalized preference for the at least one attribute level in the proportions for the currency-normalized stored value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level and the average value of the particular sub-group's currency-normalized preference for the at least one attribute level specified by the adjustment ratio. *See, e.g., Application, FIG. 13, S1304; p. 27, lines 20-27.*

(6) Grounds of Rejection to be Reviewed on Appeal

The 35 U.S.C. § 103(a) rejection of claims 1-7, 9, 10, 13-17, 19-22, 27-33, 39-45, 47, 48, 51-55, 57-60, and 65-71 as being obvious in view of the combination of U.S. Patent No. 6,826,541 (Johnston) and U.S. Patent No. 6,029,195 (Herz).

All of the pending rejections are being appealed.

(7) Argument

Claim Rejections Under 35 U.S.C. § 103

Appellants requests reversal of the rejections of claims 1-7, 9, 10, 13-17, 19-22, 27-33, 39-45, 47, 48, 51-55, 57-60, and 65-71 because Johnston and Herz—whether taken alone or in any proper combination—do not describe or suggest all of the features of independent claims 1, 22, 31, 34, 39, 60, and 69, as described more fully below.

Claims 1-7, 9, 10, 13-17, 19-21, 39-45, 47, 48, 51-55, and 57-59

Independent claim 1 recites, among other things:

predicting, using a processing device, the first consumer's answers to the first set of trade-off questions

determining a first adjustment ratio for use in adjusting the stored value that is reflective of the first consumer's preference for the at least one attribute level, the first adjustment ratio specifying proportions in which the stored value that is reflective of the first consumer's preference for the at least one attribute level and the average value of the first sub-group's preference for the at least one attribute level are to be combined to adjust the stored value that is reflective of the first consumer's preference for the at least one attribute level; and

adjusting the stored value that is reflective of the first consumer's preference for the at least one attribute level as a function of the determined first adjustment ratio and the average value of the first sub-group's preference for the at least one attribute level by combining the stored value that is reflective of the first consumer's preference for the at least one attribute level with the average value of the first sub-group's preference for the at least one attribute level in the proportions for the stored value that is reflective of the first consumer's preference for the at least one attribute level and the average value of the first sub-group's preference for the at least one attribute level specified by the first adjustment ratio

(emphasis added). Johnston and Herz—whether taken alone or in any proper combination—fail to describe or suggest these features.

Before providing a detailed outline of Johnston and Herz, Appellants would like to briefly outline the deficiencies of the cited references. In particular, the Office Action relies upon the Johnston reference to disclose “predicting, using a processing device, the first consumer's answers to the first set of trade-off questions” and “determining a first adjustment ratio for use in adjusting a stored value” and separately relies upon the Herz reference to disclose “adjusting the stored value . . . as a function of the determined first adjustment ratio.” See final Office Action, pp. 3-4, 7-8. However, the Office Action, first, fails in showing where Johnston describes predicting answers to trade-off questions and, second, the Office Action fails to point out and explain how Herz remedies the many acknowledged deficiencies of Johnson, such as how the Herz reference would adjust a stored value that is reflective of the first consumer's preference for an attribute level as a function of a first adjustment ratio allegedly determined by the Johnston reference.

Rather, the Office Action merely concludes that:

it would have been obvious . . . to know that Johnston would modify his invention to update a particular consumer profile using the average profile a subgroup of users, as taught by Herz in order to predict that a particular user profile would resemble the known interests of other users with similar profiles.

Final Office Action, p. 8 (emphasis in original). Regardless of whether such a combination would, in fact, be obvious, the Office Action's conclusion fails to account for the determined first adjustment ratio or provide evidence that use of a determined first adjustment ratio in the

system taught by Herz would have been obvious. Following is a more detailed discussion of these deficiencies.

First, the Office Action turns to two separate sections of Johnston to describe predicting a consumer's answers to a set of trade-off questions: column 10, lines 30-67 and column 25, lines 1-30. *See* Office Action, pp. 3, 5. In column 10, lines 30-67, Johnston describes the process of presenting the user with a number of different questions and receiving the user's answers to those questions. In particular, the user is: (1) asked to choose a number of attributes he/she feels are important; (2) asked to rate the importance of each of the chosen attributes; and (3) asked to answer a set of trade-off questions with regard to the rated attributes. *See* Johnston, col. 10, lines 30-67. At no point, however, does Johnston describe that his system predicts the user's answers to the trade-off questions, as recited in claim 1. Rather, Johnston simply describes asking the user for an answer to a trade-off question and storing a received answer to the question. *See id.*

Similarly, in column 25, lines 1-30, Johnston describes various real-world applications for the selector tool. In particular, Johnston describes using the selector tool to Internet-based recruiting and to the selection of assisted living facilities. *See* Johnston, col. 25, lines 1-30. However, in each of these applications, the selector tool simply presents a trade-off question to a user and records the user's answer. *See id.* Johnston does not describe that the selector tool predicts a consumer's answers to the trade-off questions, as recited in claim 1.

Second, in rejecting independent claim 1, the Office Action acknowledges that Johnston fails to describe or suggest adjusting, using a processing device, the stored value that is reflective of the first consumer's preference for the at least one attribute level as a function of the determined first adjustment ratio and the average value of the first sub-group's preference for the at least one attribute level by combining the stored value that is reflective of the first consumer's preference for the at least one attribute level with the average value of the first sub-group's preference for the at least one attribute level in the proportions for the stored value that is reflective of the first consumer's preference for the at least one attribute level and the average value of the first sub-group's preference for the at least one attribute level specified by the first adjustment ratio. *See* final Office Action, p. 6.

As described in greater detail below, Herz is similarly deficient. In support of the position that Herz teaches adjusting the stored value that is reflective of the first consumer's

preference for the at least one attribute level as a function of the determined first adjustment ratio and the average value of the first sub-group's preference for the at least one attribute level, the Office Action argues that Herz teaches:

calculating the average of the subgroup profile (see col 24, lines 15-25) and using said average to update the particular user's profile in order to predict that said particular user preference would resemble the known preferences of other users with similar profile[s] (see col 28, lines 1-67).

Final Office Action, p. 15.

Notably, however, Herz does not describe or suggest, either in the passages on which the Office Action relies or elsewhere, adjusting a stored value that is reflective of a first consumer's preference for at least one attribute level by combining the stored value that is reflective of the first consumer's preference for the at least one attribute level with an average value of the first sub-group's preference for the at least one attribute level in proportions specified by a first adjustment ratio, as recited in independent claim 1.

The passage of Herz on which the Office Action relies for teaching "calculating [an] average of [a] subgroup profile" describes techniques for grouping target objects into clusters such that similar target objects are grouped into the same clusters. *See, e.g.*, Herz at col. 24, lines 9-39. However, Herz specifically defines the "target objects" that are grouped as "an object available for access by the user, which may be either physical or electronic in nature." Herz, col. 4, lines 49-51. In other words, Herz does not regard the grouping of users, but the grouping of objects that a user may desire to access.

In addition, the passage of Herz on which the Office Action relies for teaching "using [the] average [of the subgroup profile] in order to predict that said particular user preference would resemble the known preferences of other users with similar profiles" describes that user interests for a user for whom a partial user interest profile already has been established can be predicted to resemble those of other users having profiles that are similar to the user's partially established user profile. *See, e.g.*, Herz at col. 27, line 59 to col. 29, line 3. There is not, however, any discussion in these passages of Herz or elsewhere in Herz of adjusting a stored value that is reflective of a first consumer's preference for at least one attribute level by combining the stored value that is reflective of the first consumer's preference for the at least one

attribute level with an average value of the first sub-group's preference for the at least one attribute level in proportions specified by a first adjustment ratio, as recited in independent claim 1.

Similarly, for reasons similar to those set forth above, Herz does not describe or suggest all of the features of adjusting the stored value that is reflective of the second consumer's preference for the at least one attribute level as a function of the determined second adjustment ratio and the average value of the second sub-group's preference for the at least one attribute level by combining the stored value that is reflective of the second consumer's preference for the at least one attribute level with the average value of the second sub-group's preference for the at least one attribute level in the proportions for the stored value that is reflective of the second consumer's preference for the at least one attribute level and the average value of the second sub-group's preference for the at least one attribute level specified by the second adjustment ratio, as recited in independent claim 1.

Accordingly, appellants request reversal of the section 103 rejection of independent claim 1 and dependent claims 2-7, 9, 10, 13-17, and 19-21, which depend from independent claim 1. Independent claim 39 recites features that are similar to the features discussed above in connection with independent claim 1 and does so in the context of a computer-readable medium. Accordingly, for at least the reasons discussed above in connection with independent claim 1, appellants request reversal of the section 103 rejection of independent claim 39 and dependent claims 40-45, 47, 48, 51-55, and 57-59, which depend from independent claim 39.

Claim 9

Dependent claim 9 recites that "dividing the plurality of consumers into sub-groups includes assigning consumers to sub-groups based on attribute levels that the consumers indicated as unacceptable." In rejecting claim 9, the Office Action turns to column 21, lines 15-30 of Johnston. *See* Office Action, p. 9. This section of Johnston describes that the selector tool asks a user a set of registration information. Johnston, col. 21, lines 5-9. The registration information referred to Johnston is essentially demographic information of the user, such as the user's zip code. *Id.* The selector tool then uses the provided demographic information to match the user to an existing set of attributes that correspond to the demographic information.

Johnston, col. 21, lines 14-19. In other words, Johnston describes matching users to particular attributes and alternatives based on demographic information that the user provides; the demographic information being wholly different from the preferences of a user to attributes of a product.

Therefore, Johnston does not describe or suggest assigning consumers to sub-groups based on attribute levels that the consumers indicated as unacceptable, as recited in claim 9. Accordingly, appellants request reversal of the section 103 rejection of dependent claim 9.

Claims 22, 27-30, 60, and 65-68

Independent claim 22 recites a method that includes, among other features, predicting the particular consumer's answers to the set of trade-off questions and adjusting a stored value that is reflective of a particular consumer's preference for at least one attribute level by combining the stored value that is reflective of the particular consumer's preference for the at least one attribute level with an average value of a particular sub-group's preference for the at least one attribute level in proportions specified by an adjustment ratio. For reasons that are analogous to those discussed above in connection with independent claim 1, Johnston and Herz, when taken alone or in combination, do not describe or suggest all of these features of independent claim 22.

Accordingly, appellants request reversal of the section 103 rejection of independent claim 22 and dependent claims 27-30, which depend from independent claim 22. Independent claim 60 recites features that are similar to the features discussed above in connection with independent claim 22 and does so in the context of a computer-readable medium. Accordingly, for at least the reasons discussed above in connection with independent claim 22, appellants request reversal of the section 103 rejection of independent claim 60 and dependent claims 65-68, which depend from independent claim 60.

Claims 31-33 and 69-71

Independent claim 31 recites a method that includes, among other features, predicting the particular consumer's answers to the set of trade-off questions and adjusting a stored currency-normalized value that is reflective of a particular consumer's currency-normalized preference for at least one attribute level by combining the currency-normalized stored value that is reflective of

the particular consumer's currency-normalized preference for the at least one attribute level with an average value of the particular sub-group's currency-normalized preference for the at least one attribute level in proportions specified by the adjustment ratio.

Johnston and Herz, when taken alone or in combination, do not describe or suggest all of these features of independent claim 31. The Office Action correctly admits that Johnston does not describe or suggest these features. Office Action, pp. 13-14. Moreover there is not any discussion in the passages of Herz relied upon by the Office Action to describe these features or elsewhere in Herz of adjusting a stored currency-normalized value that is reflective of a particular consumer's currency-normalized preference for at least one attribute level by combining the currency-normalized stored value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level with an average value of the particular sub-group's currency-normalized preference for the at least one attribute level in proportions specified by the adjustment ratio, as recited in claim 31.

Accordingly, appellants request reversal of the section 103 rejection of independent claim 31 and dependent claims 32 and 33, which depend from independent claim 31.

Independent claim 69 recites features that are similar to the features discussed above in connection with independent claim 31 and does so in the context of a computer-readable medium. Accordingly, for at least the reasons discussed above in connection with independent claim 31, appellants request reversal of the section 103 rejection of independent claim 69 and dependent claims 70 and 71, which depend from independent claim 69.

Conclusion

It is believed that all of the pending issues have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the prior amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

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The brief fee of \$540 is enclosed. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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Appendix of Claims

1. (Previously Presented) A computer-implemented method for calculating adjusted preference information, comprising:

storing, in a computer memory storage system and for a plurality of consumers, preference information related to different attributes of a type of product, the stored preference information for an individual consumer including numerical values that are reflective of the individual consumer's preference for different attribute levels for the attributes of the type of product, and the plurality of consumers including a first consumer, a second consumer, and other consumers;

based on the stored preference information for the plurality of consumers dividing, using a processing device, the plurality of consumers into multiple different sub-groups of constituent members for whom similar preference information is determined to be stored in the computer memory storage system, each of the multiple different sub-groups including less than all of the plurality of consumers;

based on the preference information stored for the first consumer, generating, using a processing device, a first set of trade-off questions for the first consumer that solicit answers from the first consumer regarding choices between different attribute levels for attributes of the type of product;

providing the first set of trade-off questions to the first consumer;

predicting, using a processing device, the first consumer's answers to the first set of trade-off questions;

receiving answers to the first set of trade-off questions from the first consumer;

comparing preference information stored for the first consumer to information that is reflective of the preferences of constituent members of at least some of the multiple sub-groups of consumers;

based on results of comparing the preference information stored for the first consumer to the information that is reflective of the preferences of constituent members of some of the multiple sub-groups of consumers, determining that the preference information stored for the first consumer is similar to preference information stored for constituent members of a first one of the multiple sub-groups of consumers;

selecting, using a processing device, the first sub-group of consumers from among the multiple sub-groups of consumers as a match for the first consumer based on having determined that the preference information stored for the first consumer is similar to preference information stored for constituent members of the first sub-group of consumers;

for at least one attribute level of a particular attribute of the type of product, calculating, using a processing device, an average value of the first sub-group's preference for the at least one attribute level based on the stored values that are reflective of the first sub-group's constituent members' preferences for the at least one attribute level;

based on the first consumer's received answers to the first set of trade-off questions and the predicted answers to the first set of trade-off questions for the first consumer, determining, using a processing device, a first adjustment ratio for use in adjusting the stored value that is reflective of the first consumer's preference for the at least one attribute level, the first adjustment ratio specifying proportions in which the stored value that is reflective of the first consumer's preference for the at least one attribute level and the average value of the first sub-group's preference for the at least one attribute level are to be combined to adjust the stored value that is reflective of the first consumer's preference for the at least one attribute level;

adjusting, using a processing device, the stored value that is reflective of the first consumer's preference for the at least one attribute level as a function of the determined first adjustment ratio and the average value of the first sub-group's preference for the at least one attribute level by combining the stored value that is reflective of the first consumer's preference for the at least one attribute level with the average value of the first sub-group's preference for the at least one attribute level in the proportions for the stored value that is reflective of the first consumer's preference for the at least one attribute level and the average value of the first sub-group's preference for the at least one attribute level specified by the first adjustment ratio;

based on the preference information stored for the second consumer, generating, using a processing device, a second set of trade-off questions for the second consumer that solicit answers from the second consumer regarding choices between different attribute levels for attributes of the type of product;

providing the second set of trade-off questions to the second consumer;

predicting, using a processing device, the second consumer's answers to the second set of trade-off questions;

receiving answers to the second set of trade-off questions from the second consumer;

comparing preference information stored for the second consumer to information that is reflective of the preferences of constituent members of at least some of the multiple sub-groups of consumers;

based on results of comparing the preference information stored for the second consumer to the information that is reflective of the preferences of constituent members of some of the multiple sub-groups of consumers, determining that the preference information stored for the second consumer is similar to preference information stored for constituent members of a second one of the multiple sub-groups of consumers;

selecting, using a processing device, the second sub-group of consumers from among the multiple sub-groups of consumers as a match for the second consumer based on having determined that the preference information stored for the second user is similar to preference information stored for constituent members of the second sub-group of consumers;

for the at least one attribute level, calculating, using a processing device, an average value of the second sub-group's preference for the at least one attribute level based on the stored values that are reflective of the second sub-group's constituent members' preferences for the at least one attribute level;

based on the second consumer's received answers to the second set of trade-off questions and the predicted answers to the second set of trade-off questions for the second consumer, determining, using a processing device, a second adjustment ratio for use in adjusting the stored value that is reflective of the second consumer's preference for the at least one attribute level, wherein the second adjustment ratio is different than the first adjustment ratio and specifies proportions in which the stored value that is reflective of the second consumer's preference for the at least one attribute level and the average value of the second sub-group's preference for the at least one attribute level are to be combined to adjust the stored value that is reflective of the second consumer's preference for the at least one attribute level; and

adjusting, using a processing device, the stored value that is reflective of the second consumer's preference for the at least one attribute level as a function of the determined second

adjustment ratio and the average value of the second sub-group's preference for the at least one attribute level by combining the stored value that is reflective of the second consumer's preference for the at least one attribute level with the average value of the second sub-group's preference for the at least one attribute level in the proportions for the stored value that is reflective of the second consumer's preference for the at least one attribute level and the average value of the second sub-group's preference for the at least one attribute level specified by the second adjustment ratio.

2. (Previously presented) A method according to Claim 1, wherein the preference information for the plurality of consumers includes normalized part worth values.

3. (Previously presented) A method according to Claim 2, wherein the preference for the plurality of consumers includes currency-normalized part worth values.

4. (Previously presented) A method according to Claim 1, wherein selecting the first sub-group of consumers includes selecting the first sub-group of consumers based on attribute levels identified as unacceptable by constituent members of the first sub-group of consumers.

5. (Previously presented) A method according to Claim 4, wherein the constituent members of the first sub-group of consumers identified similar attribute levels as unacceptable.

6. (Previously presented) A method according to Claim 1, wherein selecting the first sub-group of consumers includes selecting the first sub-group of consumers based on part worth values stored for constituent members of the first sub-group of consumers.

7. (Previously presented) A method according to Claim 6, wherein the constituent members of the first sub-group of consumers are associated with similar preference information.

8. (Canceled)

9. (Previously presented) A method according to Claim 1, wherein dividing the plurality of consumers into sub-groups includes assigning consumers to sub-groups based on attribute levels that the consumers indicated as unacceptable.

10. (Previously presented) A method according to Claim 1 wherein dividing the plurality of consumers into sub-groups includes assigning consumers to sub-groups based on part worth values associated with the consumers.

11-12. (Canceled)

13. (Original) A method according to Claim 1, further comprising: determining an offer to sell a product based on the mixed preference information.

14. (Original) A method according to Claim 13, further comprising:
providing the offer to the consumer.

15. (Previously presented) A method according to Claim 1, wherein the first sub-group of consumers is identical to the second sub-group of consumers.

16. (Previously presented) A method according to Claim 1, wherein the first sub-group of consumers does not include any consumers belonging to the second sub-group of consumers.

17. (Previously presented) A method according to Claim 1, wherein one or more of the constituent members of the first sub-group of consumers are members of the second sub-group of consumers.

18. (Canceled)

19. (Original) A method according to Claim 1, wherein the plurality of consumers comprises a predetermined number of past consumers for whom preference information is stored.

20. (Original) A method according to Claim 19, wherein the predetermined number of past consumers are determined based on a time at which preference information associated with each of the predetermined number of consumers was collected.

21. (Original) A method according to Claim 1, wherein the plurality of consumers comprises all past consumers for whom preference information was collected during a particular time period.

22. (Previously Presented) A computer-implemented method for calculating adjusted preference information, comprising:

storing, in a computer memory storage system and for a plurality of consumers, preference information related to different attributes of a type of product, the stored preference information for an individual consumer including numerical values that are reflective of the individual consumer's preference for different attribute levels for the attributes of the type of product, and the plurality of consumers including a particular consumer and other consumers;

based on the stored preference information for the plurality of consumers dividing, using a processing device, the plurality of consumers into multiple different sub-groups of constituent members for whom similar preference information is determined to be stored in the computer memory storage system, each of the multiple different sub-groups including less than all of the plurality of consumers;

based on the preference information stored for the particular consumer, generating, using a processing device, a set of trade-off questions for the particular consumer that solicit answers from the particular consumer regarding choices between different attribute levels for attributes of the type of product;

providing the set of trade-off questions to the particular consumer;

predicting, using a processing device, the particular consumer's answers to the set of trade-off questions;

receiving answers to the set of trade-off questions from the particular consumer;

comparing preference information stored for the particular consumer to information that is reflective of the preferences of constituent members of at least some of the multiple sub-groups of consumers;

based on results of comparing the preference information stored for the particular consumer to information that is reflective of the preferences of constituent members of some of the multiple sub-groups of consumers, determining that the preference information stored for the particular consumer is similar to preference information stored for constituent members of a particular one of the multiple sub-groups of consumers;

selecting, using a processing device, the particular sub-group of consumers from among the multiple sub-groups of consumers as a match for the particular consumer based on having determined that the preference information stored for the particular consumer is similar to preference information stored for constituent members of the particular sub-group of consumers;

for at least one attribute level of a particular attribute of the type of product, calculating, using a processing device, an average value of the particular sub-group's preference for the at least one attribute level based on the stored values that are reflective of the particular sub-group's constituent members' preferences for the at least one attribute level;

based on the particular consumer's received answers to the set of trade-off questions and the predicted answers to the set of trade-off questions for the particular consumer, determining, using a processing device, an adjustment ratio for use in adjusting the stored value that is reflective of the particular consumer's preference for the at least one attribute level, the adjustment ratio specifying proportions in which the stored value that is reflective of the particular consumer's preference for the at least one attribute level and the average value of the particular sub-group's preference for the at least one attribute level are to be combined to adjust the stored value that is reflective of the particular consumer's preference for the at least one attribute level; and

adjusting, using a processing device, the stored value that is reflective of the particular consumer's preference for the at least one attribute level as a function of the determined

adjustment ratio and the average value of the particular sub-group's preference for the at least one attribute level by combining the stored value that is reflective of the particular consumer's preference for the at least one attribute level with the average value of the particular sub-group's preference for the at least one attribute level in the proportions for the stored value that is reflective of the particular consumer's preference for the at least one attribute level and the average value of the particular sub-group's preference for the at least one attribute level specified by the adjustment ratio.

23-26. (Canceled)

27. (Previously presented) A method according to Claim 22, wherein selecting the particular sub-group of consumers includes selecting the particular sub-group of consumers based on attribute levels indicated as unacceptable by constituent members of the particular sub-group of consumers.

28. (Previously presented) A method according to Claim 27, wherein the constituent members of the particular sub-group of consumers identified similar attribute levels as unacceptable.

29. (Previously presented) A method according to Claim 22, wherein selecting the particular sub-group of consumers includes selecting the particular sub-group of consumers based on part worth values associated with each of the constituent members of the particular sub-group of consumers.

30. (Previously presented) A method according to Claim 29, wherein the constituent members of the particular sub-group of consumers are associated with similar part worth values.

31. (Previously presented) A computer-implemented method for calculating adjusted consumer preference information, comprising:

receiving, for a plurality of consumers, preference information related to different attributes of a product, the received preference information for an individual consumer including numerical values that are reflective of the individual consumer's preference for different attribute levels for the attributes of the type of product, and the plurality of consumers including a particular consumer and other consumers;

currency-normalizing the received preference information for the plurality of consumers; storing, in a computer memory storage system, the currency-normalized preference information for the plurality of consumers;

based on the stored, currency-normalized preference information for the plurality of consumers, dividing, using a processing device, the plurality of consumers into multiple different sub-groups of constituent members for whom similar currency-normalized preference information is determined to be stored in the computer memory storage system, each of the multiple different sub-groups including less than all of the plurality of consumers;

based on the currency-normalized preference information stored for the particular consumer, generating, using a processing device, a set of trade-off questions for the particular consumer that solicit answers from the particular consumer regarding choices between different attribute levels for attributes of the type of product;

providing the set of trade-off questions to the particular consumer; predicting, using a processing device, the particular consumer's answers to the set of trade-off questions;

receiving answers to the set of trade-off questions from the particular consumer; comparing currency-normalized preference information stored for the particular consumer to information that is reflective of the currency-normalized preferences of constituent members of at least some of the multiple sub-groups of consumers;

based on results of comparing the currency-normalized preference information stored for the particular consumer to information that is reflective of the currency-normalized preferences of constituent members of some of the multiple sub-groups of consumers, determining that the currency-normalized preference information stored for the particular consumer is similar to currency-normalized preference information stored for constituent members of a particular one of the multiple sub-groups of consumers;

selecting, using a processing device, the particular sub-group of consumers from among the multiple sub-groups of consumers as a match for the particular consumer based on having determined that the currency-normalized preference information stored for the particular consumer is similar to currency-normalized preference information stored for constituent members of the particular sub-group of consumers;

for at least one attribute level of a particular attribute of the type of product, calculating, using a processing device, an average value of the particular sub-group's currency-normalized preference for the at least one attribute level based on the stored currency-normalized values that are reflective of the particular sub-group's constituent members' currency-normalized preferences for the at least one attribute level;

based on the particular consumer's received answers to the set of trade-off questions and the predicted answers to the set of trade-off questions for the particular consumer, determining, using a processing device, an adjustment ratio for use in adjusting the currency-normalized stored value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level, the adjustment ratio specifying proportions in which the currency-normalized stored value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level and the average value of the particular sub-group's currency-normalized preference for the at least one attribute level are to be combined to adjust the currency-normalized stored value that is reflective of the particular consumer's preference for the at least one attribute level; and

adjusting, using a processing device, the stored currency-normalized value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level as a function of the determined adjustment ratio and the average value of the particular sub-group's currency-normalized preference for the at least one attribute level by combining the currency-normalized stored value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level with the average value of the particular sub-group's currency-normalized preference for the at least one attribute level in the proportions for the currency-normalized stored value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level and the average

value of the particular sub-group's currency-normalized preference for the at least one attribute level specified by the adjustment ratio.

32. (Original) A method according to Claim 31, further comprising:
providing an offer based on the currency-normalized information.

33. (Original) A method according to Claim 32, further comprising:
providing the offer to the consumer.

34. (Withdrawn) A method, in a system to collect consumer preference information, for determining consumer trade-off questions based on a plurality of attribute levels, each of the plurality of attribute levels being associated with an attribute and a part worth utility value, the method comprising:

grouping the attribute levels into objects including two attribute levels, each of the two attribute levels of an object being associated with different attributes; and

grouping the objects into pairs including two objects, a first object of a pair including a first two attribute levels associated with two attributes and a second object of the pair including a second two attribute levels associated with the two attributes; and

selecting, from the pairs, a plurality of pairs on which to base trade-off questions, wherein a first pair is more likely to be selected than a second pair if a sum of part worth utility values associated with each attribute level of the first pair is greater than a sum of part worth utility values associated with each attribute level of the second pair.

35-38. (Canceled)

39. (Previously Presented) A computer-readable medium storing instructions that, when executed by a processor, cause the processor to:

store, for a plurality of consumers, preference information related to different attributes of a type of product, the stored preference information for an individual consumer including numerical values that are reflective of the individual consumer's preference for different attribute

levels for the attributes of the type of product, and the plurality of consumers including a first consumer, a second consumer, and other consumers;

based on the stored preference information for the plurality of consumers, divide the plurality of consumers into multiple different sub-groups of constituent members for whom similar preference information is determined to be stored, each of the multiple different sub-groups including less than all of the plurality of consumers;

generate, based on the preference information stored for the first consumer, a first set of trade-off questions for the first consumer that solicit answers from the first consumer regarding choices between different attribute levels for attributes of the type of product;

provide the first set of trade-off questions to the first consumer;

predict the first consumer's answers to the first set of trade-off questions;

receive answers to the first set of trade-off questions from the first consumer;

compare preference information stored for the first consumer to information that is reflective of the preferences of constituent members of at least some of the multiple sub-groups of consumers;

based on results of comparing the preference information stored for the first consumer to the information that is reflective of the preferences of constituent members of some of the multiple sub-groups of consumers, determine that the preference information stored for the first consumer is similar to preference information stored for constituent members of a first one of the multiple sub-groups of consumers;

select, from among the multiple sub-groups of consumers, the first sub-group of consumers as a match for the first consumer based on having determined that the preference information for the first consumer is similar to preference information stored for constituent members of the first sub-group of consumers;

calculate, for at least one attribute level of a particular attribute of the type of product, an average value of the first sub-group's preference for the at least one attribute level based on the stored values that are reflective of the first sub-group's constituent members' preferences for the at least one attribute level;

determine, based on the first consumer's received answers to the first set of trade-off questions and the predicted answers to the first set of trade-off questions for the first consumer, a

first adjustment ratio for use in adjusting the stored value that is reflective of the first consumer's preference for the at least one attribute level, the first adjustment ratio specifying proportions in which the stored value that is reflective of the first consumer's preference for the at least one attribute level and the average value of the first sub-group's preference for the at least one attribute level are to be combined to adjust the stored value that is reflective of the first consumer's preference for the at least one attribute level;

adjust the stored value that is reflective of the first consumer's preference for the at least one attribute level as a function of the determined first adjustment ratio and the average value of the first sub-group's preference for the at least one attribute level by combining the stored value that is reflective of the first consumer's preference for the at least one attribute level with the average value of the first sub-group's preference for the at least one attribute level in the proportions for the stored value that is reflective of the first consumer's preference for the at least one attribute level and the average value of the first sub-group's preference for the at least one attribute level specified by the first adjustment ratio;

based on the preference information stored for the second consumer, generate a second set of trade-off questions for the second consumer that solicit answers from the second consumer regarding choices between different attribute levels for attributes of the type of product;

provide the second set of trade-off questions to the second consumer;

predict the second consumer's answers to the second set of trade-off questions;

receive answers to the second set of trade-off questions from the second consumer;

compare preference information stored for the second consumer to information that is reflective of the preferences of constituent members of at least some of the multiple sub-groups of consumers;

based on results of comparing the preference information stored for the second consumer to information that is reflective of the preferences of constituent members of some of the multiple sub-groups of consumers, determine that the preference information stored for the second consumer is similar to preference information stored for constituent members of a second one of the multiple sub-groups of consumers;

select, from among the multiple sub-groups of consumers, the second sub-group of consumers as a match for the second consumer based on having determined that the preference

information stored for the second consumer is similar to the preference information stored for constituent members of the second sub-group of consumers;

calculate, for the at least one attribute level, an average value of the second sub-group's preference for the at least one attribute level based on the stored values that are reflective of the second sub-group's constituent members' preferences for the at least one attribute level;

determine, based on the second consumer's received answers to the second set of trade-off questions and the predicted answers to the second set of trade-off questions for the second consumer, a second adjustment ratio for use in adjusting the stored value that is reflective of the second consumer's preference for the at least one attribute level, wherein the second adjustment ratio is different than the first adjustment ratio and specifies proportions in which the stored value that is reflective of the second consumer's preference for the at least one attribute level and the average value of the second sub-group's preference for the at least one attribute level are to be combined to adjust the stored value that is reflective of the second consumer's preference for the at least one attribute level; and

adjust the stored value that is reflective of the second consumer's preference for the at least one attribute level as a function of the determined second adjustment factor and the average value of the second sub-group's preference for the at least one attribute level by combining the stored value that is reflective of the second consumer's preference for the at least one attribute level with the average value of the second sub-group's preference for the at least one attribute level in the proportions for the stored value that is reflective of the second consumer's preference for the at least one attribute level and the average value of the second sub-group's preference for the at least one attribute level specified by the second adjustment ratio.

40. (Previously presented) A computer-readable medium according to Claim 39, wherein the preference information for the plurality of consumers comprise normalized part worth values.

41. (Previously presented) A computer-readable medium according to Claim 40, wherein the preference information for the plurality of consumers comprise currency-normalized part worth values.

42. (Previously presented) A computer-readable medium according to Claim 39, wherein the instructions that, when executed by a processor, cause the processor to select the first sub-group of consumers include instructions that, when executed by a processor, cause the processor to select the first sub-group of consumers based on attribute levels identified as unacceptable by each of the constituent members of the first sub-group of consumers.

43. (Previously presented) A computer-readable medium according to Claim 42, wherein the constituent members of the first sub-group of consumers identified similar attribute levels as unacceptable.

44. (Previously presented) A computer-readable medium according to Claim 39, wherein the instructions that, when executed by a processor, cause the processor to select the first sub-group of consumers include instructions that, when executed by a processor, cause the processor to select the first sub-group of consumers based on part worth values associated with each of the constituent members of the first sub-group of consumers.

45. (Previously presented) A computer-readable medium according to Claim 44, wherein the constituent members of the first sub-group of consumers are associated with similar preference information.

46. (Canceled)

47. (Previously presented) A computer-readable medium according to Claim 39, wherein the instructions that, when executed by a processor, cause the processor to divide the plurality of consumers into multiple different sub-groups include instructions that, when executed by a processor, cause the processor to assign consumers to sub-groups based on attribute levels that the consumers indicated as unacceptable.

48. (Previously presented) A computer-readable medium according to Claim 39, wherein the instructions that, when executed by a processor, cause the processor to divide the plurality of consumers into multiple different sub-groups include instructions that, when executed by a processor, cause the processor to assign consumers to sub-groups based on part worth values associated with the consumers.

49-50. (Canceled)

51. (Previously presented) A computer-readable medium according to Claim 39, the computer-readable medium further storing instructions that, when executed by a processor, cause the processor to:

determine an offer to sell a product based on the mixed preference information.

52. (Previously presented) A computer-readable medium according to Claim 51, the computer-readable medium further storing instructions that, when executed by a processor, cause the processor to:

provide the offer to the consumer.

53. (Previously presented) A computer-readable medium according to Claim 39, wherein the first sub-group of consumers is identical to the second sub-group of consumers.

54. (Previously presented) A computer-readable medium according to Claim 39, wherein the first sub-group of consumers does not include any consumers belonging to the second sub-group of consumers.

55. (Previously presented) A computer-readable medium according to Claim 39, wherein one or more of the constituent members of the first sub-group of consumers belong to the second sub-group of consumers.

56. (Canceled)

57. (Previously presented) A computer-readable medium according to Claim 39, wherein the plurality of consumers comprises a predetermined number of past consumers for whom preference information is stored.

58. (Previously presented) A computer-readable medium according to Claim 57, wherein the predetermined number of past consumers are determined based on a time at which preference information associated with each of the predetermined number of consumers was collected.

59. (Previously presented) A computer-readable medium according to Claim 39, wherein the plurality of consumers comprises all past consumers for whom preference information was collected during a particular time period.

60. (Previously presented) A computer-readable medium storing instructions that, when executed by a processor, cause the processor to:

- store, for a plurality of consumers, preference information related to different attributes of a type of product, the stored preference information for an individual consumer including numerical values that are reflective of the individual consumer's preference for different attribute levels for the attributes of the type of product, and the plurality of consumers including a particular consumer and other consumers;

- based on the stored preference information for the plurality of consumers, divide the plurality of consumers into multiple different sub-groups of constituent members for whom similar preference information is determined to be stored, each of the multiple different sub-groups including less than all of the plurality of consumers;

- based on the preference information stored for the particular consumer, generate a set of trade-off questions for the particular consumer that solicit answers from the particular consumer regarding choices between different attribute levels for attributes of the type of product;

- provide the set of trade-off questions to the particular consumer;

- predict the particular consumer's answers to the set of trade-off questions;

receive answers to the set of trade-off questions from the particular consumer;
compare preference information stored for the particular consumer to information that is reflective of the preferences of constituent members of at least some of the multiple sub-groups of consumers;

based on results of comparing the preference information stored for the particular consumer to the information that is reflective of the preferences of constituent members of some of the multiple sub-groups of consumers, determine that the preference information stored for the particular consumer is similar to preference information stored for constituent members of a particular one of the multiple sub-groups of consumers;

select, from among the multiple sub-groups of consumers, the particular sub-group of consumers as a match for the particular consumer based on having determined that the preference information stored for the particular consumer is similar to preference information stored for constituent members of the particular sub-group of consumers;

calculate, for at least one attribute level of a particular attribute of the type of product, an average value of the particular sub-group's preference for the at least one attribute level based on the stored values that are reflective of the particular sub-group's constituent members' preferences for the at least one attribute level;

based on the particular consumer's received answers to the set of trade-off questions and the predicted answers to the set of trade-off questions for the particular consumer, determine an adjustment ratio for use in adjusting the stored value that is reflective of the particular consumer's preference for the at least one attribute level, the adjustment ratio specifying proportions in which the stored value that is reflective of the particular consumer's preference for the at least one attribute level and the average value of the particular sub-group's preference for the at least one attribute level are to be combined to adjust the stored value that is reflective of the particular consumer's preference for the at least one attribute level; and

adjust the stored value that is reflective of the particular consumer's preference for the at least one attribute level as a function of the determined adjustment ratio and the average value of the particular sub-group's preference for the at least one attribute level by combining the stored value that is reflective of the particular consumer's preference for the at least one attribute level with the average value of the particular sub-group's preference for the at least one attribute level

in the proportions for the stored value that is reflective of the particular consumer's preference for the at least one attribute level and the average value of the particular sub-group's preference for the at least one attribute level specified by the adjustment ratio.

61-64. (Canceled)

65. (Previously presented) A computer-readable medium according to Claim 60, wherein the instructions that, when executed by a processor, cause the processor to select the particular sub-group of consumers include instructions that, when executed by a processor, cause a processor to select the particular sub-group of consumers based on attribute levels indicated as unacceptable by each constituent member of the particular sub-group of consumers.

66. (Previously presented) A computer-readable medium according to Claim 65, wherein the constituent members of the particular sub-group of consumers identified similar attribute levels as unacceptable.

67. (Previously presented) A computer-readable medium according to Claim 60, wherein the instructions that, when executed by a processor, cause the processor to select the particular sub-group of consumers include instructions that, when executed by a processor, cause the processor to select the particular sub-group of consumers based on part worth values associated with each of the constituent members of the particular sub-group of consumers.

68. (Previously presented) A computer-readable medium according to Claim 67, wherein the constituent members of the particular sub-group of consumers are associated with similar part worth values.

69. (Previously presented) A computer-readable medium storing instructions that, when executed by a processor, cause the processor to:

receive, for a plurality of consumers, preference information related to different attributes of a product, the received preference information for an individual consumer including numerical

values that are reflective of the individual consumer's preference for different attribute levels for the attributes of the type of product, and the plurality of consumers including a particular consumer and other consumers;

- currency-normalize the received preference information for the plurality of consumers;
- store the currency-normalized preference information for the plurality of consumers;

- based on the stored, currency-normalized preference information for the plurality of consumers, divide the plurality of consumers into multiple different sub-groups of constituent members for whom similar currency-normalized preference information is determined to be stored, each of the multiple different sub-groups including less than all of the plurality of consumers;

- generate, based on the currency-normalized preference information stored for the particular consumer, a set of trade-off questions for the particular consumer that solicit answers from the particular consumer regarding choices between different attribute levels for attributes of the type of product;

- provide the set of trade-off questions to the particular consumer;
- predict the particular consumer's answers to the set of trade-off questions;
- receive answers to the set of trade-off questions from the particular consumer;

- compare currency-normalized preference information stored for the particular consumer to information that is reflective of the currency-normalized preferences of constituent members of at least some of the multiple sub-groups of consumers;

- based on results of comparing the currency-normalized preference information stored for the particular consumer to the information that is reflective of the currency-normalized preferences of constituent members of some of the multiple sub-groups of consumers, determine that the currency-normalized preference information stored for the particular consumer is similar to currency-normalized preference information stored for constituent members of a particular one of the multiple sub-groups of consumers;

- select, from among the multiple sub-groups of consumers, the particular sub-group of consumers as a match for the particular consumer based on having determined that the currency-normalized preference information stored for the particular consumer is similar to currency-

normalized preference information stored for constituent members of the particular sub-group of consumers;

calculate, for at least one attribute level of a particular attribute of the type of product, an average value of the particular sub-group's currency-normalized preference for the at least one attribute level based on the stored currency-normalized values that are reflective of the particular sub-group's constituent members' currency-normalized preferences for the at least one attribute level;

determine, based on the particular consumer's received answers to the set of trade-off questions and the predicted answers to the set of trade-off questions for the particular consumer, an adjustment ratio for use in adjusting the currency-normalized stored value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level, the adjustment ratio specifying proportions in which the currency-normalized stored value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level and the average value of the particular sub-group's currency-normalized preference for the at least one attribute level are to be combined to adjust the currency-normalized stored value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level; and

adjust the stored currency-normalized value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level as a function of the determined adjustment ratio and the currency-normalized value of the particular sub-group's currency-normalized preference for the at least one attribute level by combining the currency-normalized stored value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level with the average value of the particular sub-group's currency-normalized preference for the at least one attribute level in the proportions for the currency-normalized stored value that is reflective of the particular consumer's currency-normalized preference for the at least one attribute level and the average value of the particular sub-group's currency-normalized preference for the at least one attribute level specified by the adjustment ratio.

70. (Previously presented) A computer-readable medium according to Claim 69, the computer-readable medium further storing instructions that, when executed by a processor, cause the processor to:

provide an offer based on the currency-normalized information.

71. (Previously presented) A computer-readable medium according to Claim 70, the computer-readable medium further storing instructions that, when executed by a processor, cause the processor to:

provide the offer to the consumer.

72-77. (Canceled)

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Evidence Appendix

None.

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Related Proceedings Appendix

None.